was altogether unfavourable. Knowing something, however, of the zeal with which the survey of India is being prosecuted, and of the importance of several exact determinations of the longitudes of Indian stations, I am not altogether convinced that the determination of the longitude of Peshawur would present insurmountable difficulties or be utterly useless in a geographical sense. I observe also that the Indian railway system is to be extended to Peshawur, and therefore I venture to surmise that the place is not altogether inaccessible.

I note, in conclusion, that stations useful for Halley's method are (in the present instance) always useful, and sometimes among the very best stations for Delisle's method, while they are manifestly the most advantageous stations for the direct method. The inference is too obvious to need enforcing.

Note on the Nautical Almanac Values of the Semidiameters of the Sun and Venus used in the calculations of the Transit of Venus. By Edwin Dunkin, Esq.

In a Report prepared by Mr. G. W. Hill, entitled, "Charts and Tables for facilitating predictions of the several phases of the Transit of *Venus* in December, 1874," forming Part II. of "Papers relating to the Transit of *Venus* in 1874," published by authority of the United States Government, the following remarks on the value of the semidiameter of the Sun, used in the computations of the *Nautical Almanac*, occur on page 8, "In the British *Nautical Almanac* the value $961''\cdot82$ is used, and is the same as that given for the reduction of meridian-observations of the Sun. Le Verrier states (*Annales*, vol. vi. p. 40) that the value deduced from the previous transits of *Venus* is $958''\cdot424$. Hence it is probable that predictions from the elements of the British *Nautical Almanac* will be found to be considerably in error from this cause."

With reference to these remarks, and to prevent any misunderstanding on this important point, it is but proper to state that the value $961''\cdot82$, printed in the Preface to the *Nautical Almanac*, has not been used in the computations relating to the transit of *Venus*. This has been evident to every one who has had occasion to examine the elements inserted on page 434 of the *Nautical Almanac* for 1874. A very slight comparison of the tabular semidiameters of the Sun and *Venus*, contained in these elements, with the corresponding semidiameters in the solar and planetary sections, will show at once that *corrected* values have been adopted in the calculation of the phases of the transit as given in the *Nautical Almanac*. The amount of the correction is also clearly evident, by noting that the true semidiameter inserted on

page 434 is 0″·6 less than that for December 9 on page 223. A comparison of the semidiameter of *Venus*, given on pages 313 and 434, will show the amount of correction applied to the planet's semidiameter.

Since my attention has been drawn to the paragraph quoted from Mr. Hill's report, I have been informed by Mr. Hind that the adopted corrections have been deduced from the meridional observations of the Sun and *Venus* made at Greenwich. The correction applied to the *Nautical Almanac* semidiameter of the Sun is therefore — 0″·53, which is the same as that given in the Introduction to the *Greenwich Observations*, as the mean result of numerous comparisons of the observed and tabular diameters. Mr. Hind has availed himself of Mr. Stone's value of the semidiameter of *Venus*, as the best possible modern determination, resulting as it does from a considerable number of vertical measurements of the diameter observed with the transit-circle at the Royal Observatory. (*Monthly Notices*, vol. xxv. pp. 57–59.)

Kidbrooke, Blackheath,
March 6, 1873.

On the Markings on Venus. By J. M. Wilson, Esq.

As some doubt exists whether markings are ever really seen on *Venus*, it may be worth while to call attention to the present appearance of the planet. There certainly *seems* to be the same bright region round the north cusp, separated by a darker region from the rest of the surface, that was frequently observed here in 1871. But it would be well that it should be examined by others.

The instrument used here is Alvan Clark's $8\frac{1}{4}$-inch, powers various.

Temple Observatory, Rugby,
Feb. 13.

Note by Mr. Denison on his Paper on the Barometric Error of Clocks.

Since the printing of my paper of last January I have found that Dr. Robinson's barometric compensation was the same in principle as mine, though I inferred the contrary from the way he spoke of it, and he gave no reference to his own description, which I find in the 5th volume of the *Memoirs*. He used two barometers entirely above the bob, while I think one sufficient, as a slight want of symmetry in the plane of vibration cannot affect the pendulum sensibly, if at all. And with an iron jar, which all the best pendulums now have, the barometer cannot be